

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>88311</b>	<b>FOR FURTHER ACTION</b>	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below
International application No. <b>PCT/AU99/01171</b>	International filing date <i>(day month year)</i> <b>23 December 1999</b>	Earliest Priority Date <i>(day month year)</i> <b>23 December 1998</b>
Applicant: <b>GRADIPORE LIMITED</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **4** sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

#### 1 Basis of the report

a With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item:

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form

☐ filed together with the international application in computer readable form

☐ furnished subsequently to this Authority in written form

☐ furnished subsequently to this Authority in computer readable form

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

☐ Certain claims were found unsearchable (See Box I)

☐ Unity of invention is lacking (See Box II)

4 With regard to the **title**,

☒ the text is approved as submitted by the applicant

☐ the text has been established by this Authority to read as follows:

5 With regard to the **abstract**,

☒ the text is approved as submitted by the applicant

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6 The figure of the **drawings** to be published with the abstract is figure No.

☐ as suggested by the applicant

☒ None of the figures

☐ because the applicant failed to suggest a figure

☐ because this figure better characterizes the invention

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/AU99/01171

**A. CLASSIFICATION OF SUBJECT MATTER**

Int. Cl. A61L 2/02, C07K 3/14, A61K 35/14

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC A61L 2/02, C07K 3/14, A61K 35/14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
AU: IPC as aboveElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
STN, MEDLINE, CHEMICAL ABSTRACTS, BOSIS, WPIDS, [SEARCH TERMS - gradientflow, preparative electrophoresis, purification, isolation, separation, contaminant]**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	Corthals, G.L. <i>et al.</i> Electrophoresis, 1997, Vol. 18, No. 3-4, pages 317-323, "Prefractionation of protein samples prior to two-dimensional electrophoresis"	1 to 3, 9 to 16
X	Horvath, S.J. <i>et al.</i> Electrophoresis, 1996, Vol. 17, No. 1, pages 224-226, "Preparative affinity membrane electrophoresis"	1 to 3, 9 to 16
X	Corthals, G.L. <i>et al.</i> Electrophoresis, 1997, Vol. 17, No. 4, pages 771-775, "The role of pH and membrane porosity in preparative electrophoresis"	1 to 3, 9 to 16

☒ Further documents are listed in the continuation of Box C ☐ See patent family annex

Special categories of cited documents	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"Z" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

23 March 2000

Date of mailing of the international search report  
2 MAY 2000

Name and mailing address of the ISA/AU

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## INTERNATIONAL SEARCH REPORT

International application No

PCT/AU99/01171

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	Horvath, S.J. <i>et al.</i> , Electrophoresis, 1995, Vol. 16, No. 1, pages 98-100, "Preparative reflux electrophoresis"	1 to 3, 9 to 16
X	Horvath, S.J. <i>et al.</i> , Electrophoresis, 1994, Vol. 15, No. 7, pages 968-971, "Multifunctional apparatus for electrokinetic processing of proteins"	1 to 3, 9 to 16
X	Applied and Theoretical Electrophoresis, Vol. 3, No. 1, 1992, pages 13-16, C.W. Wrigley <i>et al.</i> , "Rapid (Ten Minute) pore-gradient electrophoresis of proteins and peptides in Micrograd gels"	1 to 3, 9 to 16
X	Journal of Chromatography, Vol. 773, No. 1-2, 1997, pages 229-309, G.L. Corthals <i>et al.</i> , "Purification by reflex electrophoresis of whey proteins and of a recombinant protein expressed in <i>Dictyostelium discoideum</i> "	1 to 3, 9 to 16
X	Separation Science and Technology, Vol. 27, No. 1, 1992, pages 11-27, J.L. Schmidt <i>et al.</i> , "Electrophoresis along a Semipermeable Membrane Surface"	1 to 3, 9 to 16
X	Biotechnology and Bioengineering, Vol. 30, No. 1, 1987, pages 123-137, C. Mullon <i>et al.</i> , "Forced-flow electrophoresis of proteins and viruses"	1 to 3, 9 to 16
X	Journal of Chromatography, Vol. 707, No. 1, 1995, pages 77-85, K.D. Cole <i>et al.</i> , "Free-solution electrophoresis of proteins in an improved density gradient column and by capillary electrophoresis"	1 to 3, 9 to 16
X	WO/A. 94/22904 (GRADIPORE LIMITED) 13 October 1994 (13 10 94) the whole document	1 to 3, 9 to 16

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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No  
**PCT/AU99/01171**

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
WO	94/22904	AU	64203/94	EP	691983	US	5650055

END OF ANNEX

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